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PCT/GB2005/0290



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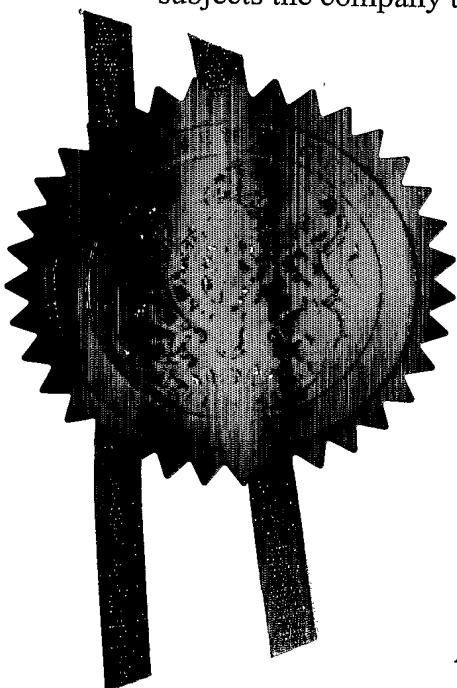
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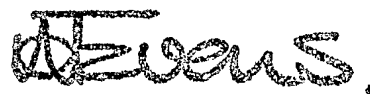
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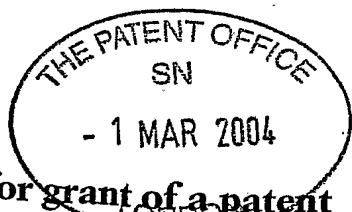
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The Patent Office

Cardiff Road  
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1. Your reference

FFW2

2. Patent application number

(The Patent Office will fill in this part)

0404603.3

3. Full name, address and postcode of the or of each applicant (underline all surnames)

see O/L 26.3.04

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

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4. Title of the invention

PERSONAL URINAL

5. Name of your agent (if you have one)

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

AS ABOVE

MR. J. A-A. CAMPBELL  
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Patents ADP number (if you know it)

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country

Priority application number  
(if you know it)

Date of filing  
(day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing  
(day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

- a) any applicant named in Part 3 is not an inventor, or
  - b) there is an inventor who is not named as an applicant, or
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Patents Form 1/77

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Continuation sheets of this form

Description

1/ SHEET

Claim(s)

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Abstract

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Drawing(s)

11 SHEETS X 11

10. If you are also filing any of the following, state how many against each item.

Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (Patents Form 7/77)

Request for preliminary examination and search (Patents Form 9/77)

Request for substantive examination (Patents Form 10/77)

Any other documents (please specify)

11 J. V. Campbell,  
J. V. Campbell,  
R. Campbell

I/We request the grant of a patent on the basis of this application.

Signature

J. V. Campbell

Date

1<sup>st</sup> MAR 04

12. Name and daytime telephone number of person to contact in the United Kingdom

MR. J OR R. CAMPBELL  
0208-299-4400

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Notes

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Page 1/11, shows three applications of a male incontinence device wherein (a) is a motorised system, (b) a leg bag and (c) a free standing calibrated container.

Page 2/11, shows a cross section through the dismantled system wherein 1 is the ventage appendage with internally rolled upper edge and low tension elasticated adjuster. No. 2 shows the expandable ring, No. 3 shows the lockable liquid detector with the non-return valve and circumferential anti-rise rim. No. 4 shows the empty housing, No. 5 shows a press fit base plate, No. 6 shows the motor, No. 7 is the removable levelling device and No. 8 is a plan revealing the fin/propeller position.

Page 3/11, shows a cross section through the gravity fed system, wherein No. 9 is a self-locking non-return valve and No.10 is a detachable outlet leading to a leg bag or free standing container.

Page 4/11, shows a labelled female incontinence device.

Page 5/11, shows 3 applications of a female incontinence device.

Page 6/11, shows a cross section through the assembled direct drive system No. 11, No. 12 is the elliptical bowl with the pervious membrane attached, No. 13 is a press fit base plate and No. 14 is a plan of the non-return valve and liquid detector.

Page 7/11, shows a cross section through the flexible gear driven system with 1 of 4 adjustable anchoring strap in position, No. 15 is a flexible detachable valve outlet leading to a groin bag, No. 16 is a flexible drive shaft leading to the motor compartment of the groin bag and No. 17 is the detached pervious membrane.

Page 8/11, shows a cross section through the assembled belt driven device wherein No. 18 is the removed belt and No. 19, is the base plate with female profile.

Page 9/11, No. 20 shows a cross section through the gravity fed system, revealing the profile of the elliptical bowl with its flexible detachable membrane, its elevated perforated edge and the slope of the internal circumferential rim. No. 21 is a non return valve and No. 22, is a detachable inlet leading to a leg bag or a free standing container and No. 23, is a plan of the system revealing the 4 adjustable anchoring straps, the pervious membrane and the non return valve.

Page 10/11, No. 24 shows the development of the quilted reusable jacket with 2 zippable compartments and No. 25 is a disposable groin bag with a perforated inlet to aid dispersion.

Page 11/11 shows an isometric view of the clippable electronic system to be fitted inside the groin bag compartment, revealing the location of the motor, the flexible drive shaft, the battery, the visual L.C.D. display and control panel enclosed and removed.

## CLAIMS

- 1) An incontinence device for receiving urine from a user comprising a bag tailored to fit the groin region of the user wherein the bag accepts urine above the point of exit via a tube and has an additional flexible detachable self closing outlet wherein the bag has two compartments to hold a container housing a motor with flexible drive, battery and electronic circuit, a housing comprising a motorised system for accepting urine consisting of an automatic liquid detector a non return valve and a motorised pump.
- 2) An incontinence device according to claim 1, wherein the motorised housing is made of plastic with terminal screw receptacles, wherein said housing incorporates a removable vertical levelling device, wherein said device audibly alerts the user in the event of the motorised system/impeller unit becoming elevated to an extent that it is unable to accept urine (when sitting or lying) wherein said device is activated after a predetermined time (5 seconds)
- 3) An incontinence device according to claim 2, wherein the motorised housing is tapered in shape to allow the contents to be removed, cleaned and reassembled in one direction only.
- 4) An incontinence device according to claim 1 wherein the 360° sensitivity liquid detector and non return valve is made as one unit to aid easy dismantling and reassembling after cleaning, wherein the valve's gland can be extracted during menstruation thereby preventing sticking and the liquid detector can be electronically varied in sensitivity by the user to cater for personal need.
- 5) An incontinence device according to claim 3 wherein the motorised housing accommodates a flexible, detachable, expandable and vented appendage into which a penis can be inserted, wherein said appendage has an internally rolled upper edge to facilitate an expandable ring thereby catering for variation in size and an additional low tension elasticated band to permit minor expansion and contraction.
- 6) An incontinence device according to claim 5, wherein said detachable appendage permits safety overflow in the event of an electrical or mechanical malfunction.
- 7) An incontinence device according to claim 1, wherein a detachable, flexible valved urine inlet is connected to the motorised unit and the groin bag.
- 8) An incontinence device according to claim 1, wherein said bag is made of flexible, impervious, reusable material, or sealed disposable diaper type construction, wherein said diaper type accepts a perforated inlet to aid the equal dispersion of urine, wherein said diaper type is best used at bedtime and during menstruation.
- 9) An incontinence device according to claim 1, wherein a groin bag further incorporates an adjustable elasticised waist and leg bands, wherein said bag has an upper inlet, and a lower outlet onto which a spring loaded self closing outlet is connected to vacate urine from said bag via the fly of the trousers when necessary.
- 10) An incontinence device according to claim 9, wherein the groin bag can be fitted inside a soft quilted washable and reusable jacket to promote comfort, wherein said jacket has two zipable compartments to contain female menstrual paraphernalia.

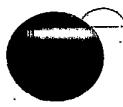
- 11) An incontinence device wherein the motorised system/impeller unit is located directly below the point of exit, wherein all urine entering the system does so exclusively under gravity, and is then impelled along the flexible tube into the groin bag to be vacated when necessary.
- 12) An incontinence device according to claim 11, comprising a vertical weight bearing leg strap or a free standing calibrated container herein illustrated.
- 13) An incontinence device according to claim 1, wherein a motorised/impeller system can be either directly driven, flexibly driven incorporating a gear system, or flexibly driven incorporating a pulley system.
- 14) An incontinence device according to claim 1, wherein said device contains an elliptical shape urinal bowl made of plastic, with 4 external anchoring points onto which adjustable elasticated straps are placed to anchor the device onto the adjustable waistband of a female user.
- 15) A female incontinence device according to claim 14, wherein said elliptical bowl has a horizontal or vertical and elevated circumferential perforated edge which accepts a soft, flexible, pervious, detachable, washable and reusable membrane.
- 16) An incontinence device according to claim 15, wherein said elliptical bowl permits safety overflow in the event of an electrical or mechanical malfunction.
- 17) An incontinence device according to claim 15, wherein said elliptical bowl has an internal circumferential rim, thereby preventing urine from reaching the pervious membrane, wherein said container can be fitted with a blood sensitive warning device.
- 18) An incontinence device according to claim 1 wherein the container, housing the motor with the flexible drive shaft, the electronic circuit, and battery are held in position within the groin bag flap/compartment.
- 19) An incontinence device according to claim 1, wherein the electronic device permits the user to select, program, customise and control the volume of all audible signals, and vary the speed of the motor to comply with individual demand.
- 20) An incontinence device according to claim 18, wherein said electronic device facilitate an audible or visual low voltage signal, wherein said device can be fitted with a minijack earphone to assist the hearing impaired.
- 21) An incontinence device according to claim 1, wherein said electronic device can incorporate a glucose sensitive detector with digital storage and readback facility via an external monitor or the purpose built monitor V.D.U.
- 22) An incontinence device according to claim 17, wherein said electronic device incorporates a plug in P.C.B. wherein said P.C.B. can be removed and upgraded to cater for changing demands.



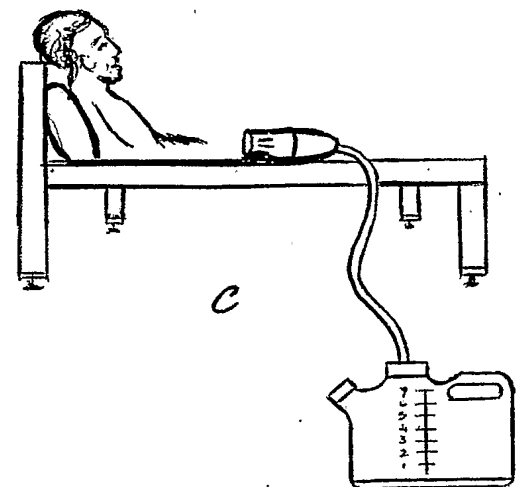
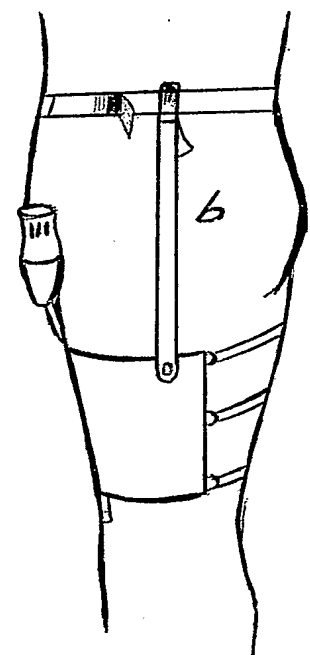
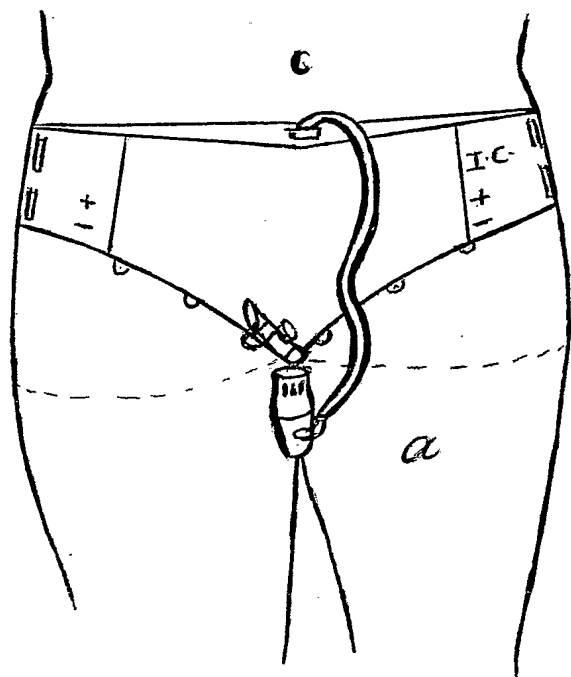
## ABSTRACT

A urinal device which has a groin shape urine collection bag, manufactured from impervious material which may be plastic. Preferably urine enters the groin bag through the upper edge, higher than the point of exit. A sheath appendage, or in the case of a female, a specially designed elliptical bowl receives urine or other body waste from the body assisted by a battery operated pump. The groin bag may be reusable or disposable, and conveniently emptied via the detachable self closing outlet. A liquid detector comprising two or more perforated steel mesh plates, preferably stainless steel may be provided with optional warning device. The urinal device may also be used as a gravity fed system with a conventional leg bag or freestanding container.

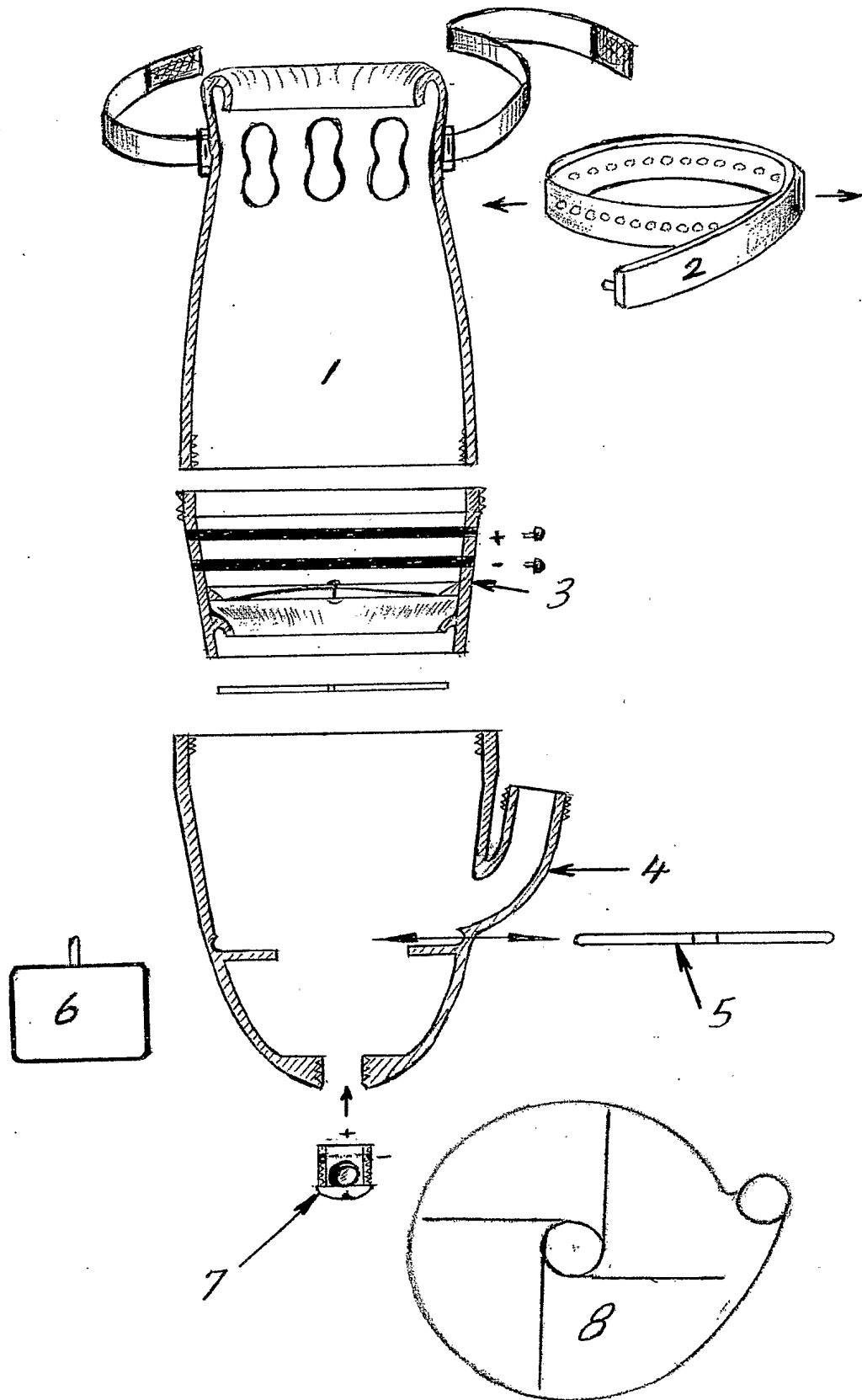




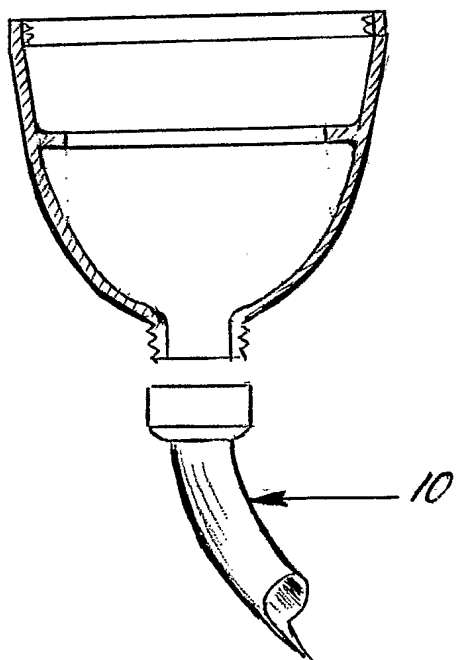
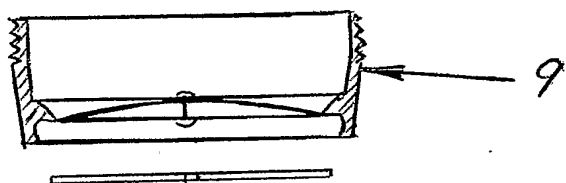
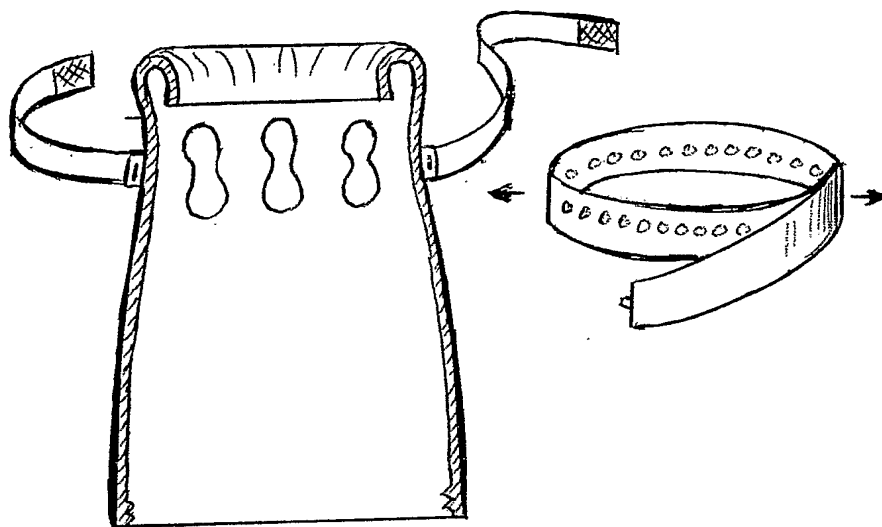
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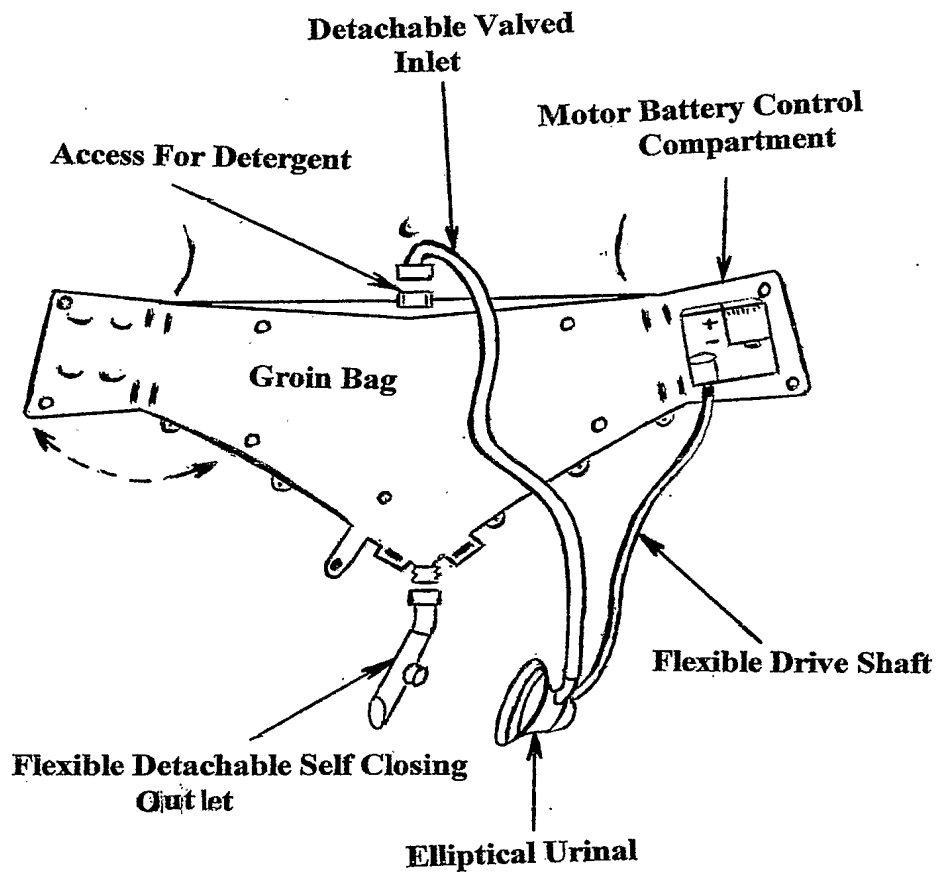
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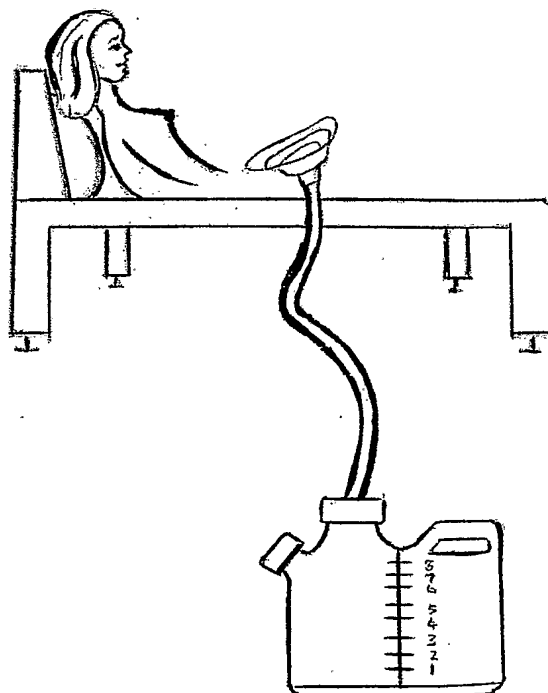
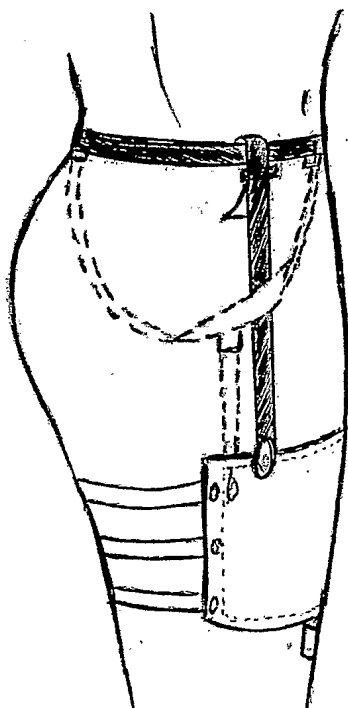
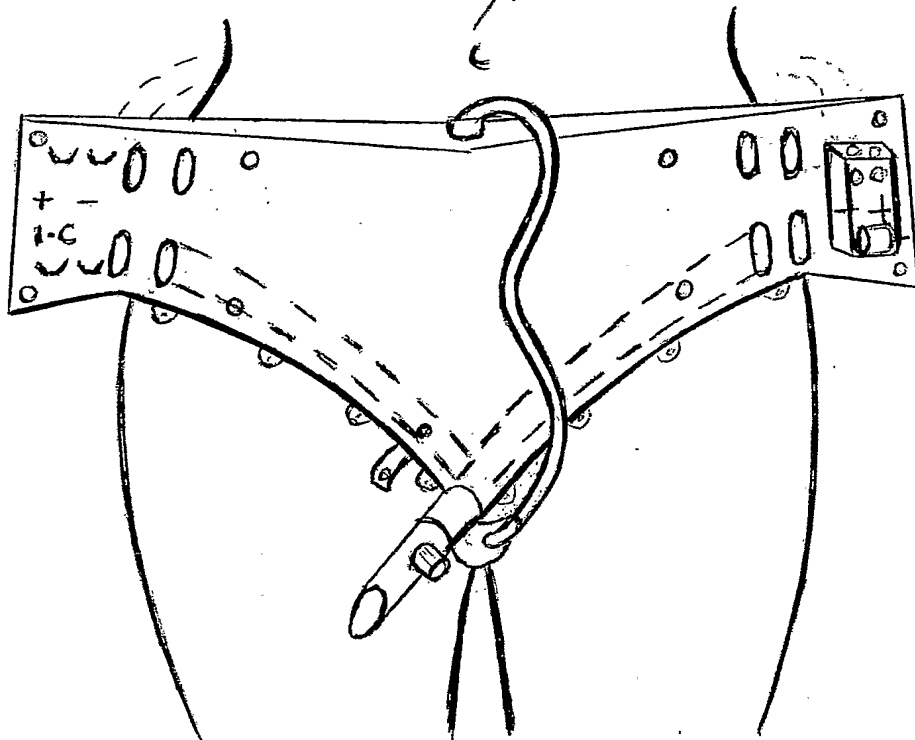
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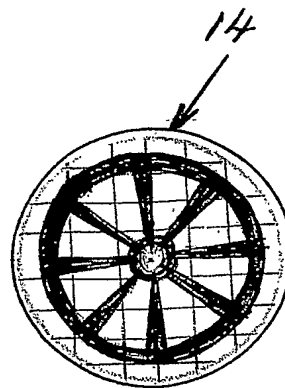
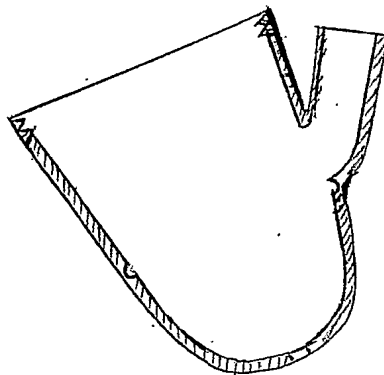
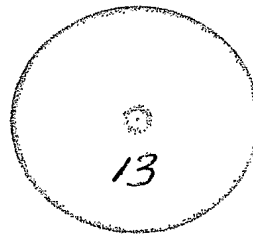
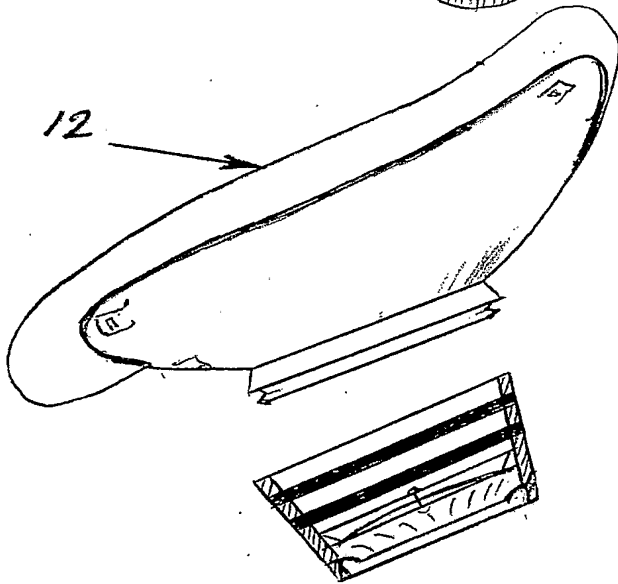
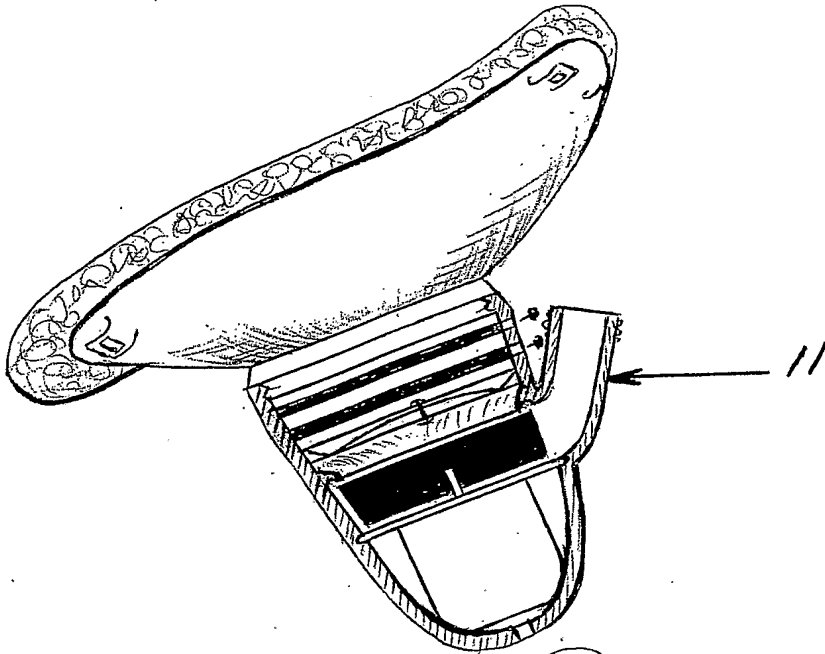
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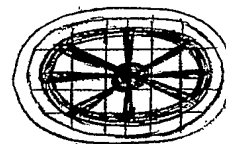
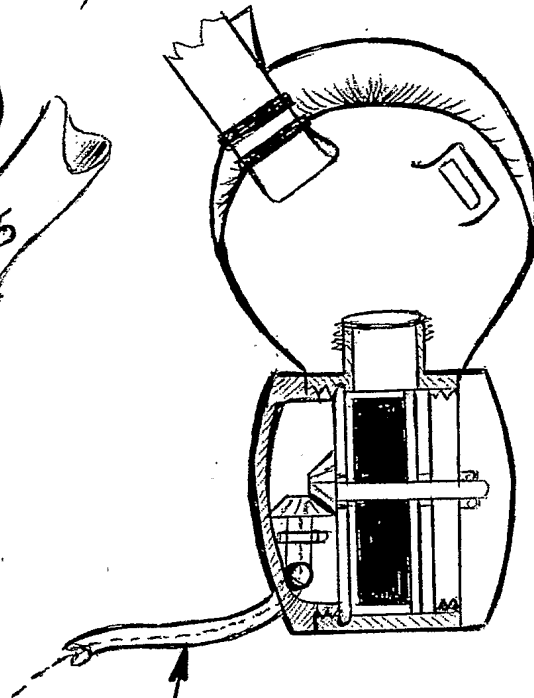
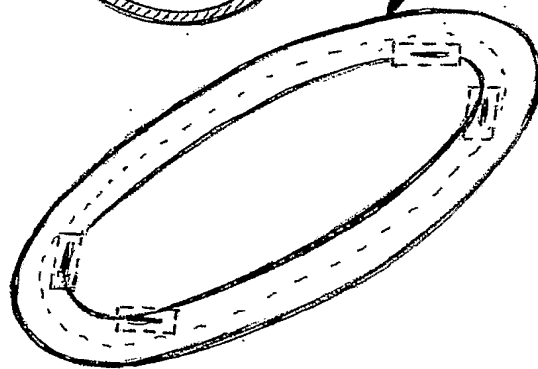
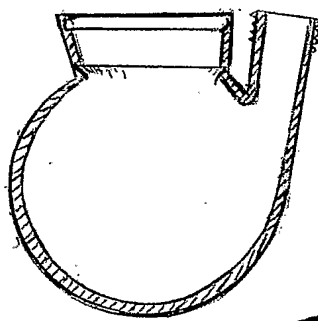
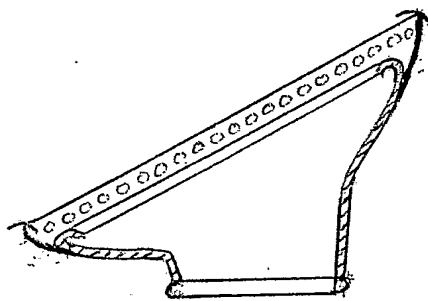
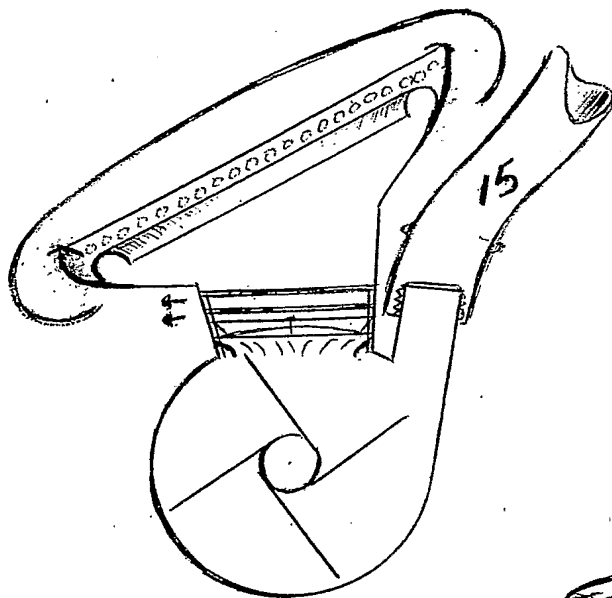


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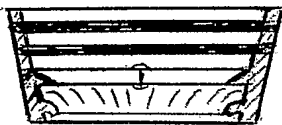
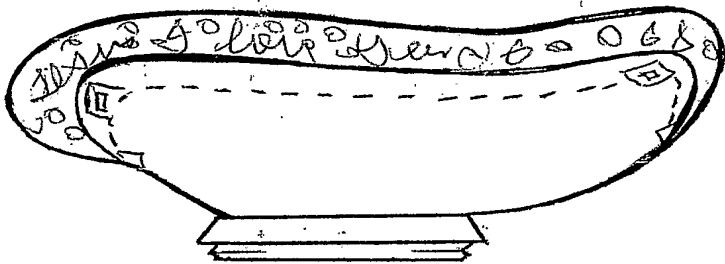
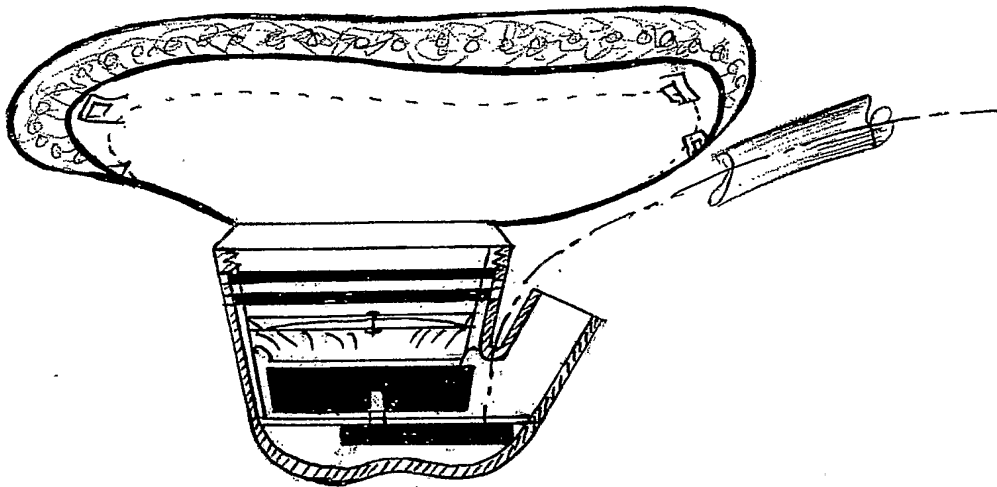


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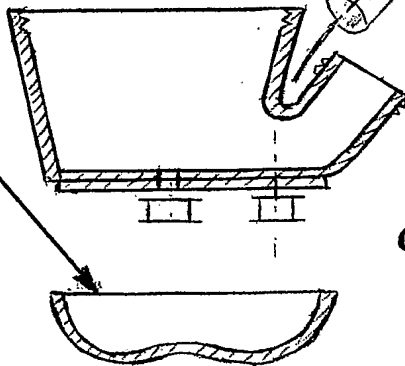
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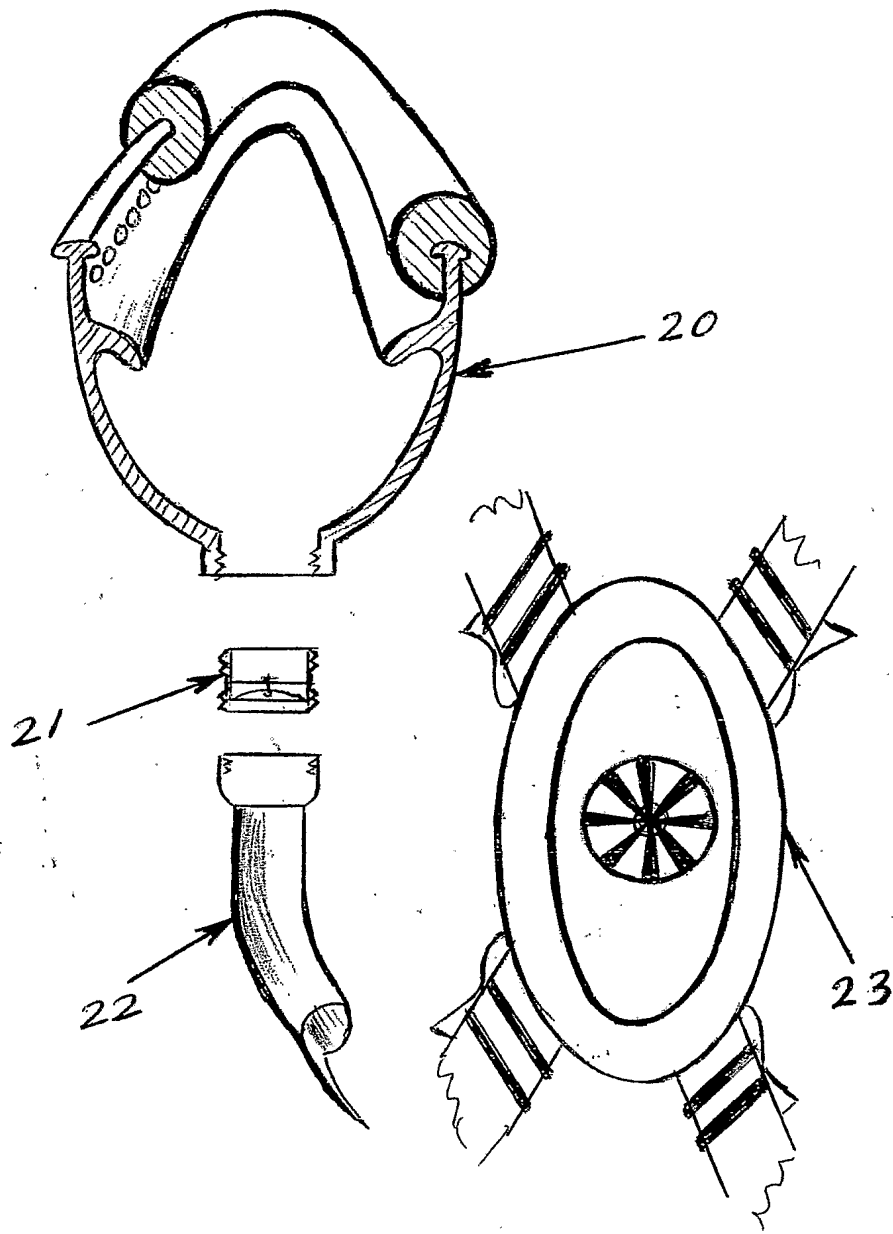
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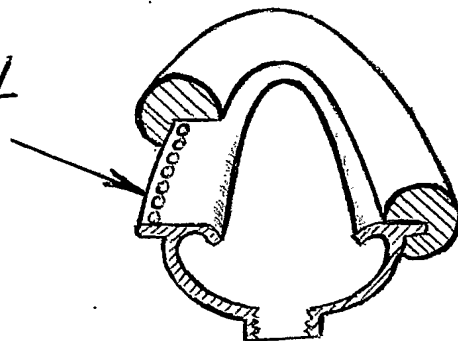




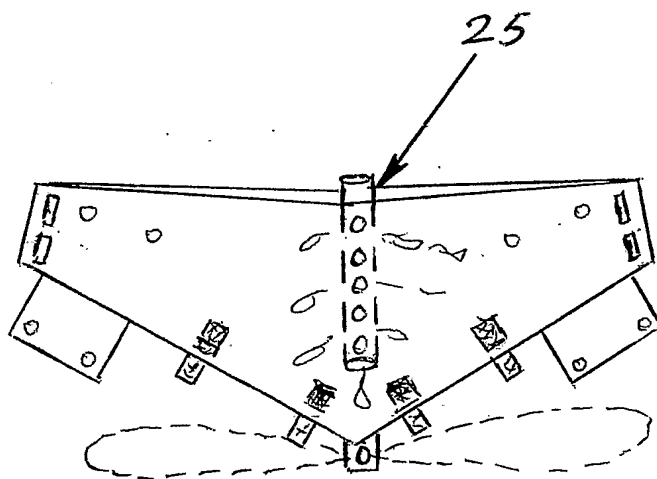
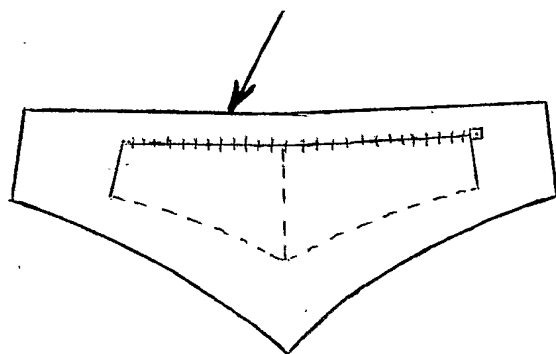
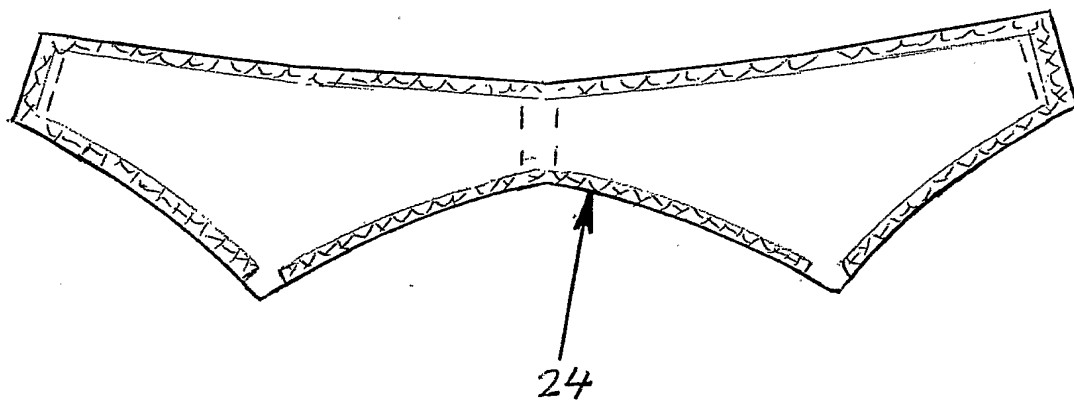
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HORIZONTAL  
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PERFORATION



10/11



L.C.D. &  
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